



STATE OF MARYLAND

DMMH

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September 2, 2010

Public Health & Emergency Preparedness Bulletin: # 2010:34 Reporting for the week ending 08/28/10 (MMWR Week #34)

CURRENT HOMELAND SECURITY THREAT LEVELS

National: Yellow (ELEVATED) *The threat level in the airline sector is Orange (HIGH)
Maryland: Yellow (ELEVATED)

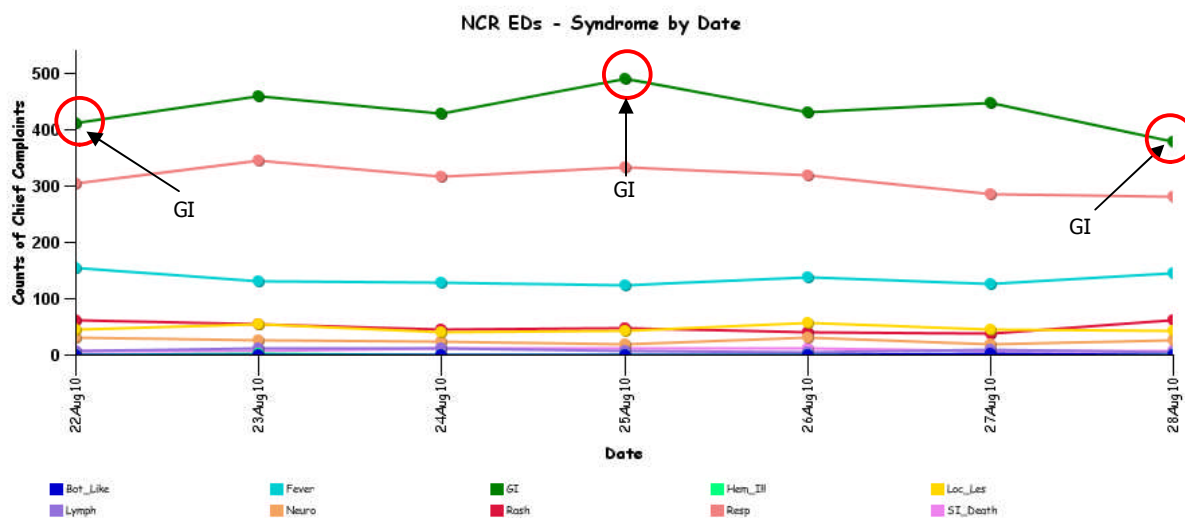
SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

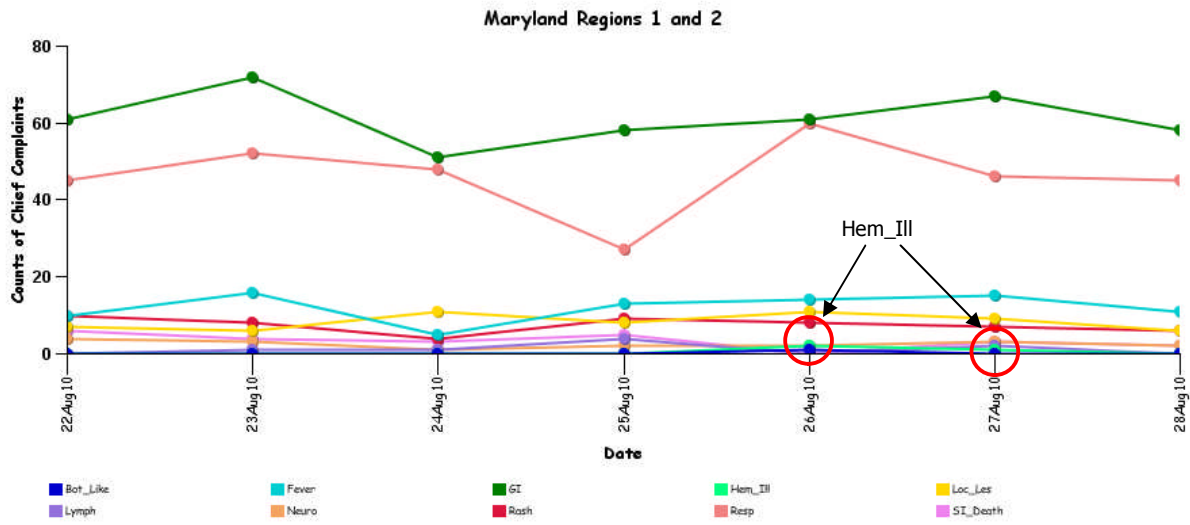
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR Spring 2006 (v 1.3) now uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

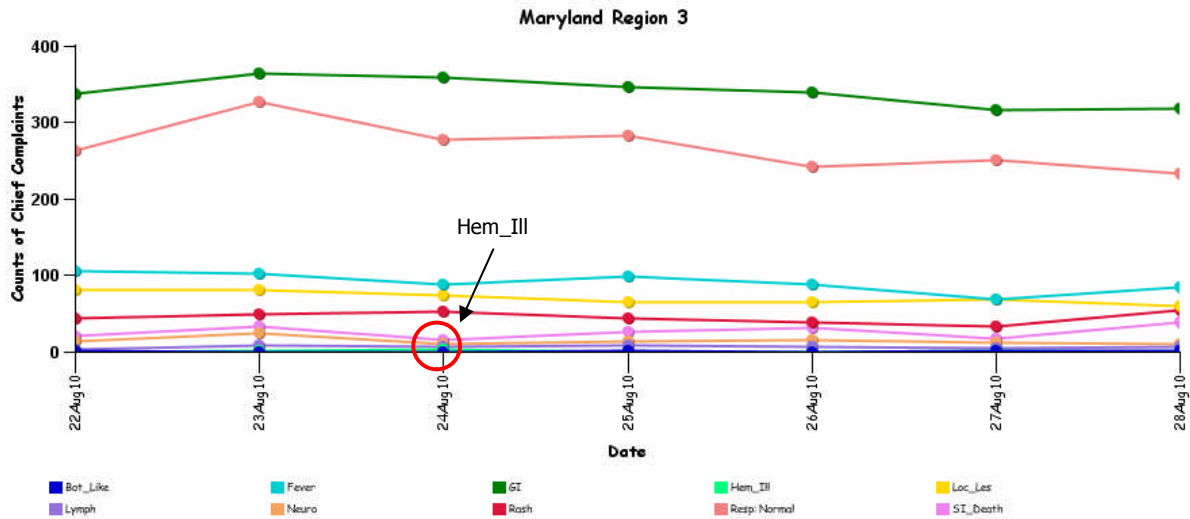
MARYLAND ESSENCE:



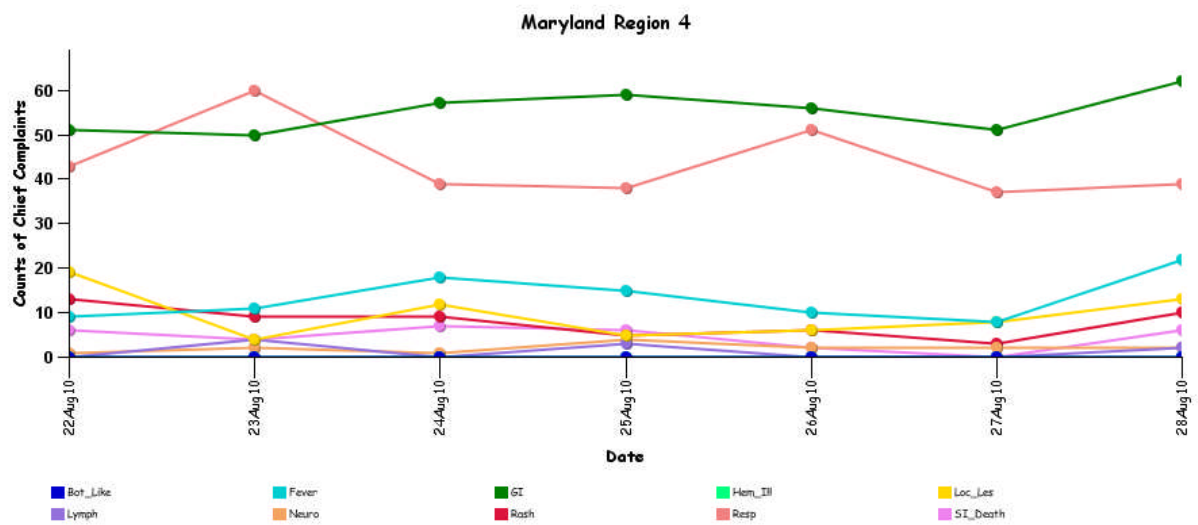
* Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE



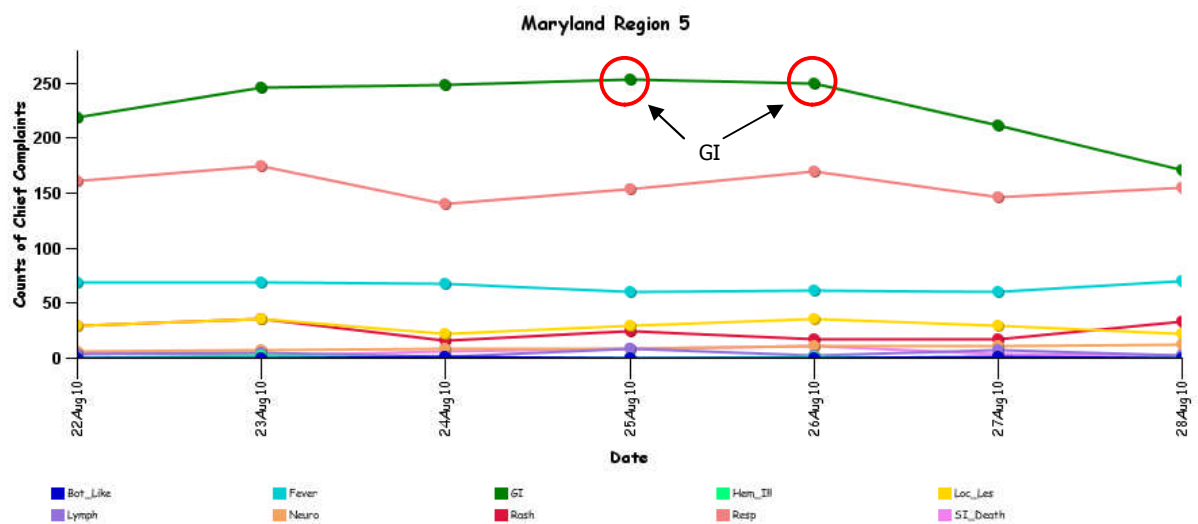
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore city, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

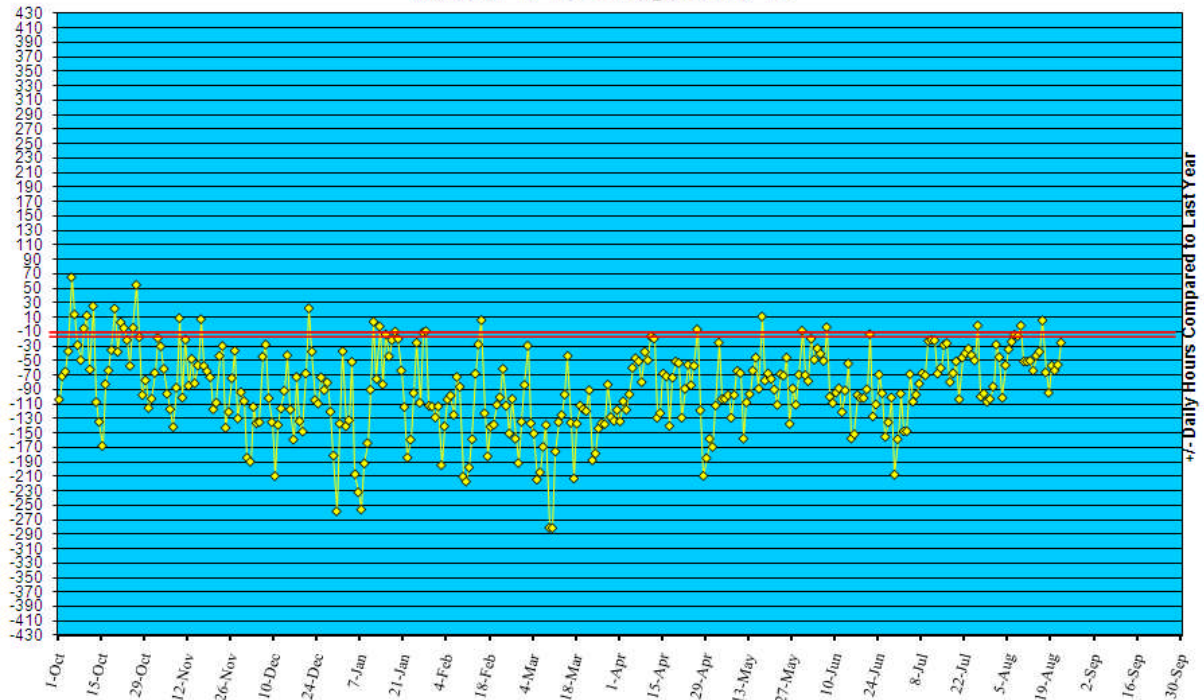


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/09.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '09 to August 22, '10



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in July 2010 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (August 22 – August 28, 2010):	10	0
Prior cases (August 15 – August 21, 2010):	14	0
Week#34, 2009 (August 23 – August 29, 2009):	19	0

7 outbreaks were reported to DHMH during MMWR Week 34 (Aug. 22-28, 2010)

3 Gastroenteritis outbreaks

1 outbreak of GASTROENTERITIS in a Nursing Home
2 outbreaks of GASTROENTERITIS in Daycare Centers

2 Foodborne gastroenteritis outbreaks

1 outbreak of GASTROENTERITIS/FOODBORNE associated with a Workplace
1 outbreak of GASTROENTERITIS/FOODBORNE associated with a Private Home

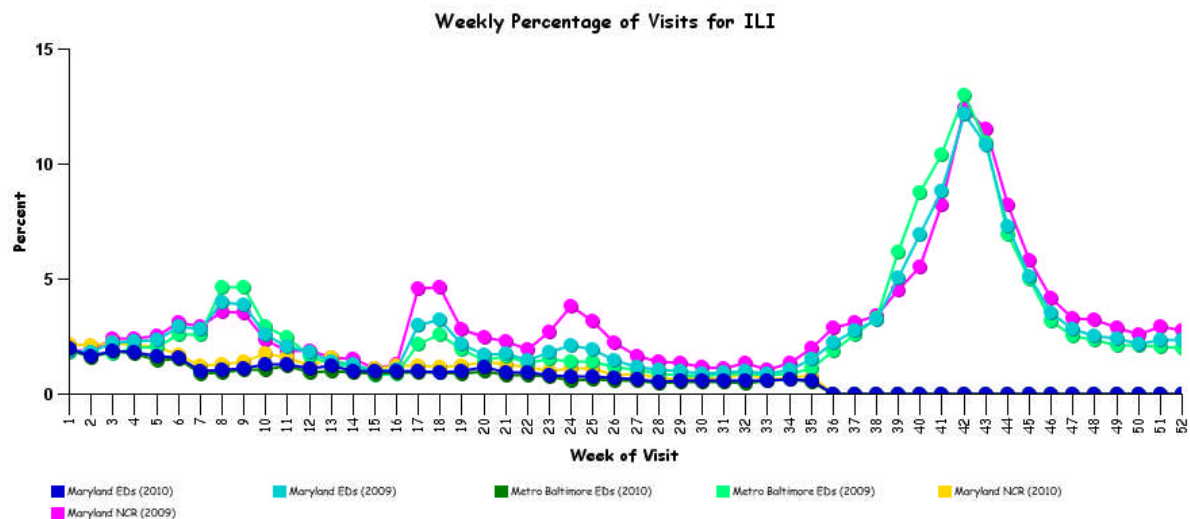
2 Respiratory illness outbreaks

2 outbreaks of PNEUMONIA in Nursing Homes

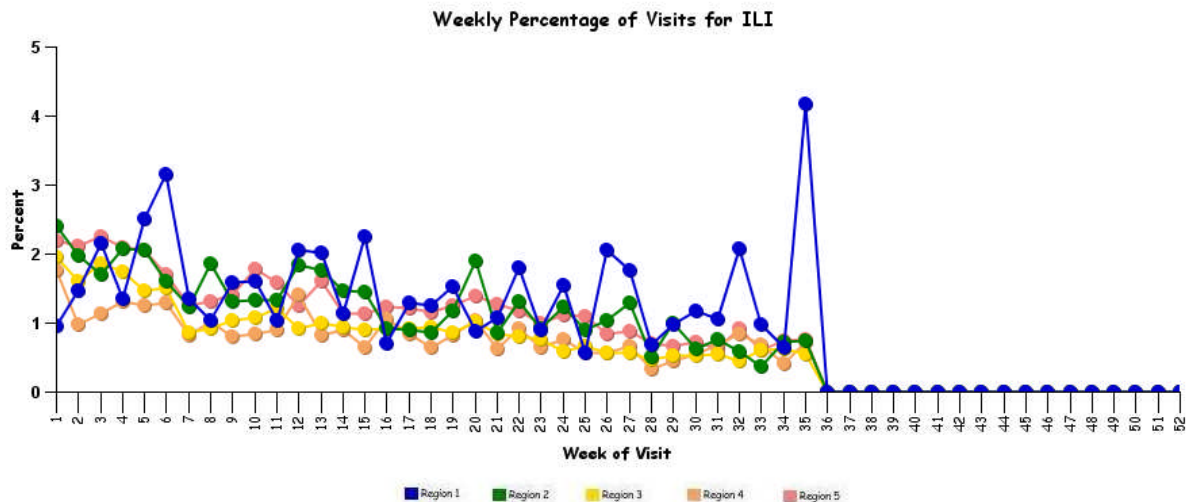
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



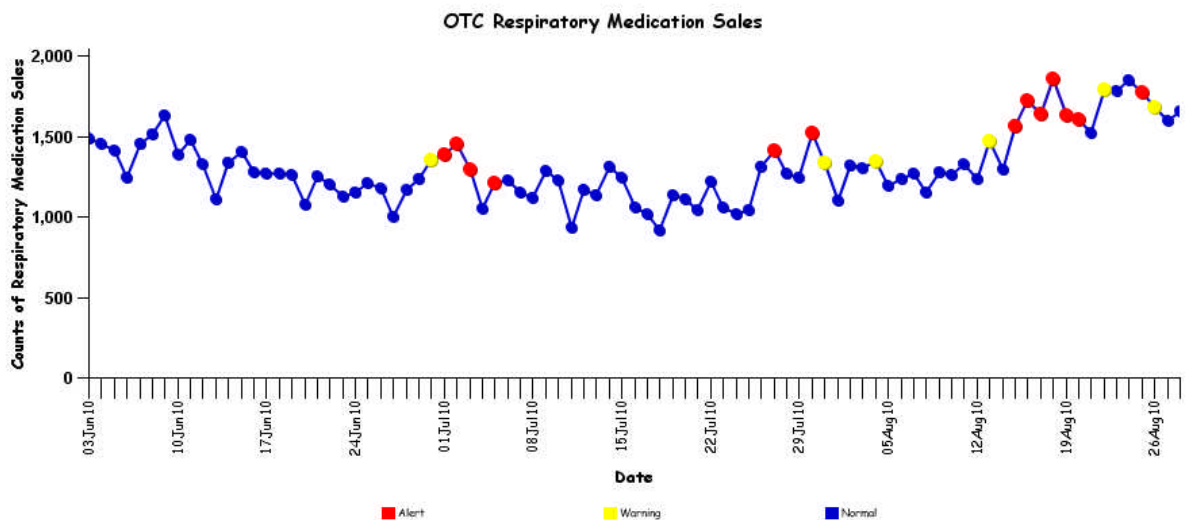
* Includes 2009 and 2010 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2010 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



AVIAN INFLUENZA-RELATED REPORTS:

WHO update: The current WHO phase of pandemic alert for avian influenza is 3.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of August 12, 2010, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 504, of which 299 have been fatal. Thus, the case fatality rate for human H5N1 is about 59%.

H1N1 INFLUENZA (Swine Flu):

INFLUENZA PANDEMIC (H1N1) WHO UPDATE: 27 Aug 2010, worldwide [pandemic] H1N1 2009 [pandemic] virus transmission remains most intense in parts of India and in parts of the temperate southern hemisphere, particularly New Zealand and more recently in Australia.

In India, the current national influenza H1N1 2009 epidemic, which 1st began during late May and June 2010 in the southern state of Kerala (co-incident with start of the monsoon rains), continues to remain regionally intense in several western and southern states as well as the in the capital. The western state of Maharashtra, which to date, has detected the highest numbers of cases (including fatal cases), continues to record the most intense influenza H1N1 2009 [pandemic] activity; however, the rate of increase in the numbers of new cases reported per week appears to have slowed during mid-August 2010, suggesting that current epidemic activity may be peaking.

Increasing H1N1 2009 activity has also been reported in Delhi since early August 2010, and in the southern states of Karnataka and Andhra Pradesh since late July 2010. A number of other states, primarily in western and northern India, reported small numbers of new cases during the 3rd week of August 2010, suggesting that low level circulation of H1N1 2009 may be more geographically extensive. Since late July 2010, the vast majority of influenza virus detections have been H1N1 2009 [pandemic].

In New Zealand, [influenza] H1N1 2009 [pandemic] virus transmission remains active and locally intense, particularly in areas that were less affected during last winter's 1st pandemic wave. As of the 3rd week of August 2010, the overall national weekly rate of consultations for ILI [influenza-like illness] continued to increase above the seasonal baseline for the 4th consecutive week; however, the rate of increase in ILI consultations appears have slowed during the most recent reporting week, suggesting that peak epidemic activity may occur in the weeks ahead.

Although the overall national rates of ILI consultations has not exceeded levels seen during the 2009 winter pandemic wave, several areas of New Zealand, most notably Hawke's Bay, Hutt Valley and Lakes, are all reporting local rates of ILI consultations that match or surpass rates seen at the national level at the peak of last winter's pandemic wave. The vast majority of influenza virus detections during the current epidemic period have been H1N1 2009.

In Australia, during the 1st 2 weeks of August 2010, data from several surveillance systems indicate that influenza activity is increasing, including a one week increase in the national rate of ILI consultations, regional spread of ILI activity in 3 southern and eastern states, and a sharp 2-week rise in the proportion of sentinel respiratory samples testing positive for influenza virus (an increase from 5 to 15 percent). However, overall national rates of ILI consultations remain well below levels observed during the 2009 winter pandemic wave.

The majority of recent influenza virus isolations have been characterized as H1N1 2009 [pandemic]; however, seasonal H3N2 viruses have also been detected at low levels. Of note, an online influenza surveillance system that tracks the rate of ILI in the community found that recent increases in the rate of ILI have been among persons who were unvaccinated against H1N1 2009 virus. Although significantly fewer severe and total cases of H1N1 2009 virus infection have been detected this year compared to last winter, the median age of H1N1 2009 virus infected cases appears to similar although slightly older (21 versus 26 years old).

Resources:

<http://www.cdc.gov/h1n1flu/>

<http://www.dhmh.maryland.gov/swineflu/>

NATIONAL DISEASE REPORTS:

SALMONELLOSIS, SEROTYPE ENTERITIDIS, EGGS RECALL (USA): 27 August 2010, From 1 May to 25 Aug 2010, a total of 2403 illnesses were reported. Don't eat recalled eggs. Recalled eggs might still be in grocery stores, restaurants, and consumers' homes. Consumers who have recalled eggs should discard them or return them to their retailer for a refund. A searchable database of products affected by the recall is available to consumers. Individuals who think they might have become ill from eating recalled eggs should consult their health care providers.

CDC is collaborating with public health officials in multiple states, the FDA, and the USDA's Food Safety and Inspection Service to investigate a nationwide increase of *Salmonella* [enterica serotype] Enteritidis (SE) infections with an indistinguishable pulsed-field gel electrophoresis (PFGE) pattern JEGX01.0004. This is the most common PFGE pattern for SE in the PulseNet database. Investigators are using DNA analysis of *Salmonella* bacteria obtained through diagnostic testing to identify cases of illness that may be part of this outbreak. Because the outbreak PFGE pattern (outbreak strain) commonly occurs in the USA, some of the cases identified with this outbreak strain may not be related to this outbreak.

In early July 2010, CDC identified a nationwide sustained increase in the number of *S.* Enteritidis isolates with PFGE pattern JEGX01.0004 uploaded to PulseNet, the national subtyping network made up of state and local public health laboratories and federal food regulatory laboratories that performs molecular surveillance of foodborne infections. This increase began in May 2010, and is evident in the epidemic curve, or epi curve. From 1 May to 25 Aug 2010, a total of 2403 illnesses were reported. However, some cases from this time period have not been reported yet, and some of these cases may not be related to this outbreak.

Based on the previous 5 years of reports to PulseNet, we would expect approximately 933 total illnesses during this same period. Many states have reported increases of this pattern since May [2010]. Because of the large number of expected cases during this period, standard methods of molecular subtyping alone are not sufficient to determine which reported cases might be outbreak-associated. CDC is currently conducting testing using advanced molecular methodologies to help distinguish between outbreak-related cases and sporadic (or background) cases.

Illnesses that occurred after 23 Jul 2010 might not yet be reported due to the time it takes between when a person becomes ill and when the illness is reported. This takes an average of 2 to 3 weeks for *Salmonella*.

Epidemiologic investigations conducted by public health officials in 10 states since April [2010] have identified 26 restaurants or event clusters where more than a single ill person with the outbreak strain has eaten. Data from these investigations suggest that shell eggs are a likely source of infections in many of these restaurants or event clusters. Preliminary information indicates that Wright County Egg, in Galt, Iowa, was an egg supplier in 15 of these 26 restaurants or event clusters. To date, no new restaurant or event clusters have been reported to CDC. A formal traceback was conducted by state partners in California, Colorado, and Minnesota, in collaboration with FDA and CDC, to find a common source of shell eggs. Wright County Egg in Iowa was found as the common source of the shell eggs associated with 3 of the clusters. Through traceback and FDA investigational findings, Hillandale Farms of IA, Inc. was identified as another potential source of contaminated shell eggs contributing to this outbreak. FDA is currently conducting extensive investigations at both of these firms in Iowa. The investigations involve sampling, records review, and looking for potential sources of contamination, such as feed. (Food Safety Threats are listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

EASTERN EQUINE ENCEPHALITIS (NEW YORK): 27 August 2010, A 2-year-old gelding in Oswego County is the state's 1st confirmed equine case this year [2010] of eastern equine encephalitis, also known as EEE. The horse has been euthanized. The infected horse was purchased at a New York auction earlier this year. The young horse had an unknown vaccination history at the time of purchase and was not vaccinated after purchase, said state Agriculture and Markets Commissioner Patrick Hooker. Last week [16-20 Aug 2010], the gelding showed typical signs of EEE, including loss of appetite, circling and leaning against the stall. After examination by a private veterinarian, the horse was euthanized. Brain samples were sent to the state Department of Health's Wadsworth Laboratory and tested positive for EEE. To date, the other horses on the same premises are not showing any signs of EEE and have since been vaccinated. EEE is a rare viral disease of horses and humans that is spread by infected mosquitoes. So far, there have been no reported nor confirmed human cases of EEE in 2010. "New York's abundant water sources and humid climate unfortunately make the perfect breeding ground for mosquitoes and the EEE virus," Hooker said. "Therefore, we highly encourage horse owners to protect their animals and consider vaccinating for EEE. The EEE vaccine has proven to drastically reduce the incidence of the virus in horses and can be easily administered by a private veterinarian." Hooker said humans cannot become infected by handling an infected horse, nor can a horse acquire the virus from another infected horse; however, the presence of an infected horse in the area indicates that mosquitoes carrying EEE are present and infected mosquitoes pose a threat to both humans and horses. While there is no treatment or cure for this disease, vaccines are available and found to be effective in protecting horses from this virus. (Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, BOVINE (NORTH DAKOTA): 24 August 2010, North Dakota's Agriculture Department on Tuesday [24 Aug 2010] said more cases of anthrax had been confirmed in cattle. The new cases were in northeast North Dakota's Pembina County. Earlier cases were confirmed in Barnes, Dickey and Sioux counties, all in the southern half of the state. State animal health officials are continuing to urge ranchers to have their cattle vaccinated against the disease. Anthrax bacteria spores lie dormant in the ground and become active under conditions such as heavy rainfall, flooding or drought. North Dakota usually has a few anthrax cases in cattle every year. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS:

JAPANESE ENCEPHALITIS (INDIA): 28 August 2010, At least 215 people, mostly children, have died in an outbreak of Japanese encephalitis in an impoverished region of northern India and the death toll is likely to soar, officials said Saturday [28 Aug 2010]. Eastern parts of India's most populous state Uttar Pradesh are ravaged by encephalitis each year ... but this is one of the worst outbreaks, officials said. The deaths of 4 more children on Saturday [28 Aug 2010] pushed the toll to 215, with hundreds sick in hospitals in Gorakhpur, an area of 14 million people, regional health officer UK Srivastava told AFP by telephone from Gorakhpur. "A total of 1324 patients had been admitted in hospitals until Saturday in Gorakhpur," which is the epicentre of the outbreak, and "more encephalitis patients are coming into our hospitals," Srivastava said. The outbreak began in early July [2010]. "We fear the total number of encephalitis cases will go up to at least 3500 and the death rate will be at a ratio of around 20 percent," he said. "We have begun spraying insecticide to wipe out populations of the *Culex* mosquitoes which transmits the disease [virus] and we're handing out chlorine to villagers to disinfect drinking water supplies," Srivastava said. KP Kushwaha, chief

pediatrician at Gorakhpur's BRD Medical College, said doctors were overwhelmed ... and "encephalitis usually surfaces by August but this year [2010] patients began coming in from early July" and if it continues this is going to be "an impossible task to handle," he added. VS Nigam, in charge of Uttar Pradesh's encephalitis prevention program, said a mammoth project to contain the disease had ended with 35 million children vaccinated in the state's 34 districts. But as soon children are vaccinated against Japanese encephalitis, they fall sick with acute encephalitis syndrome "because when one virus is suppressed by vaccines, others become dominant," he said. "It's a large challenge," he added. The regional chapter of the Voluntary Health Association, India's largest non-governmental organization, which works alongside the UN Children's Fund (UNICEF), blamed the annual tragedy on the state's failure to effectively immunize children. "A high alert is sounded only after an encephalitis epidemic flares," association executive director JP Sharma said. "Preventive steps should be taken well ahead of the monsoon as vaccines need an incubation period to make human beings immune to the virus," Sharma told AFP (immunity is not immediate following vaccination, there is a time lag during which time the immune system develops antibodies against the antigen contained in the vaccine). (Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, BOVINE (BANGLADESH): 28 August 2010, The number of reported anthrax infections in Bangladesh continues to rise, with 8 more people found to be infected. The 8 new infections bring the total number of infections in Sirajganj and Pabna to 171, BDNews24.com reports. All eight of the newest infections were from the Shahjadpur Upazila [sub district] area, which has seen a total of 48 anthrax infections so far. To fight the infections, which are believed to have stemmed from the consumption of anthrax tainted meat, teams have been dispatched to vaccinate cattle in Belkuchi, Kamarkhand, and Shahjadpur Upazila in Sirajganj. No human deaths have been reported to date as a result of the anthrax infections, which were first detected in Sirajganj on 19 Aug 2010. The anthrax form affecting the Bangladeshi villagers is a cutaneous form that produces black lesions on the skin. While not directly transferable between people, anthrax spores are able to infect people through the air. As the threat of bioterror anthrax has grown, attention is also focused on preventing and containing naturally occurring anthrax outbreaks. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, BOVINE (CANADA): 28 August 2010, There's been another anthrax outbreak, but this one has only resulted in the death of one animal so far. It's in a small cattle herd in the Prince Albert area. Lynn Bates, with the Canadian Food Inspection Agency says this is an area where anthrax has occurred in the past, most recently in a bison herd in 2008. Bates says the animals in the herd have been vaccinated for anthrax now and the farm is under quarantine. There have been 2 other cases of anthrax in the province so far this year [2010], both are in the southern part of the province around Weyburn. There were substantial deaths in a bison herd in the RM [rural municipality] of Wellington and there were 15 deaths, 14 cattle, and one horse, on a farm in the RM of Fillmore. (Anthrax are listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

ANTHRAX, HUMAN, OVINE (RUSSIA): 28 August 2010, A spokesman for the regional emergencies service told RIA Novosti that 2 residents of a remote farmstead in Russia's North Caucasus Republic of Dagestan have been diagnosed with anthrax. "The patients are 2 men, born in 1957 and 1967. They are now in satisfactory condition," the source said. The 2 men contracted the disease after eating an anthrax-infected sheep. A total of 4 people also living at the farmstead have been vaccinated against the disease and received prevention treatment. Their health is now being monitored, and none developed symptoms so far. All sheep at the farm have been quarantined for a month. No other cases of the disease have been detected. (Anthrax is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

PLAGUE (SOUTH AMERICA): 26 August 2010, On Epidemiological Week (EW) 32 of this year [8-14 Aug 2010], the Ministry of Health and Sports of the Plurinational State of Bolivia registered a confirmed case of bubonic plague in a male, 14-years-old, from the municipality of Apolo, department of La Paz who died on 7 Aug 2010. To date, no new cases were reported. Regarding the plague outbreak in Peru, from EW 32 to date, the Ministry of Health registered 27 cases of plague, of which 11 were laboratory confirmed. Of these 27 registered cases, 21 were bubonic plague (including one death), 4 pneumonic plague and 2 deaths from septicemic plague. 25 of them acquired the infection in the province of Ascope and 2 in Trujillo. The last case of pneumonic plague symptoms began on 11 Aug 2010, and there were no new cases thereafter. (Plague is listed in Category A on the CDC list of Critical Biological Agents) *Non-suspect case

JAPANESE ENCEPHALITIS (NEPAL): 25 August 2010, One more patient died while undergoing treatment for a serious bout of Japanese encephalitis disease at the Seti Zonal Hospital, Dhangadi in far-west Kailali district Monday [23 Aug 2010]. The victim has been identified as from Tribhuvanbasti, Kanchanpur. With this, the disease has claimed 3 lives in the district so far. A few weeks ago, 2 minors -- a 2-year-old and 5-year-old of Pahalanpur, Kailali -- died while undergoing treatment for the disease at the hospital. Likewise, more than 12 people have fallen sick due to an outbreak of the disease in Kailali. (Viral encephalitis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

BRUCELLOSIS, OVINE (AUSTRALIA): 25 August 2010, Ovine brucellosis has been confirmed in 20 commercial Victorian sheep flocks this year [2010], sparking tracebacks to ensure infected rams did not come from studs accredited as free of the disease. The Department of Primary Industries' (DPI) sheep disease project leader Robert Suter said he would normally only expect 2-3 reports of ovine brucellosis in Victorian flocks at this time of the year. The recent increase in confirmed reports followed drops in scanning or lamb marking rates of 10-20 per cent, triggering an investigation, he said. He was not aware of any interstate flocks being affected or identified as a source of infected rams. Ovine brucellosis caused infertility in affected rams and Dr Suter said in one case an infected ram was shared among 3 flocks. The increased number of reports was a concern because it came at a time when a lot of attention was being focused on flock reproductive performance and rebuilding the nation's sheep flock, he said. "It is disappointing for producers when they put a lot of effort into building a fertile ewe flock which is managed well throughout pregnancy only to have the other part of the reproductive equation, the ram, not able to do his job," Dr Suter said. "The only treatment is to cull these rams." Dr Suter said DPI was trying to identify the sources of infected rams to ensure they did not come

from flocks accredited under the Ovine Brucellosis Accreditation Scheme. None of the recently reported cases indicated there had been any breakdown in the scheme's accreditation process, he said. "The best protection is to buy only from ovine brucellosis-free accredited ram sources and check that they can provide a current accreditation certificate. "If in doubt, have your ram flock assessed by a veterinarian 2 or so months before mating, as this allows time to source replacement rams if necessary," Dr Suter said. "Even if brucellosis is not present, the examination can identify rams of sub-optimal fertility well prior to mating." He said affected rams could be identified by examination of the scrotum and its contents by a veterinarian, who would confirm suspect animals with a blood test as other conditions could mimic brucellosis signs. Dr Suter said once brucellosis had been introduced into the ram flock, it often took a long series of examinations and blood tests to achieve a clean flock of rams. (Brucellosis is listed in Category B on the CDC list of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST:

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmd.maryland.gov/>

Maryland's Resident Influenza Tracking System: www.tinyurl.com/flu-enroll

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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